HPC model Service Manual

Factory Model : 17”19”LCD MONITOR(DVI)

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HPC

electronic(shenzhen)co.,LTD

January 2007

Ⅰ. SAFETY PRECAUTIONS

This monitor is manufactured and tested on a ground principle that a user's safety comes first. However, improper use or installation may cause damage to the monitor as well as to the user. Carefully go over the following WARNINGS before installing and keep this guide handy.

WARNINGS:

1 . This monitor should be operated only at the correct power sources indicated on the label on the rear end of the monitor. If you're unsure of the power supply in your residence, consult your local dealer or power company.

2 . Use only the special power adapter that comes with this monitor for power input.

3 . Do not try to repair the monitor yourself, as it contains no user-serviceable parts. Only a qualified technician should repair this monitor.

4 . Do not remove the monitor cabinet. There are high-voltage parts inside that may cause electric shock to human bodies, even when the power cord is unplugged.

5 . Stop using the monitor if the cabinet is damaged. Have it checked by a service technician.

6 Put your monitor only in a clean, dry environment. If it gets wet, unplug the power cable immediately and consult your service technician.

7 . Always unplug the monitor before cleaning it. Clean the cabinet with a clean, dry cloth. Apply non-ammonia based cleaner onto the cloth, not directly onto the glass screen.

8.Do not place heavy objects on the monitor or power cord.

Ⅱ. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety visual inspections and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltages, wattage, etc. Before replacing any of these components read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Ⅲ. SERVICE NOTES

1 . When replacing parts or circuit boards, clamp the lead wires around terminals before soldering.

2 . When replacing a high wattage resistor (more than 1W of metal oxide film resistor) in circuit board, keep the resistor about 5mm away from circuit board.

3 . Keep wires away from high voltage, high temperature components and sharp edges.

4 . Keep wires in their original position so as to reduce interference.

5 . Usage of this product please refers to also user's manual.

V. SERVICE TOOL & EQUIPMENT REQUIRED

1. SIGNAL GENERATOR OR PC
2. SCREW DRIVER
3. IRON
4. ABSORBER
5. SOLDER

VI . SPECIFICATIONS

5.1 PRODUCT SPECIFICATIONS

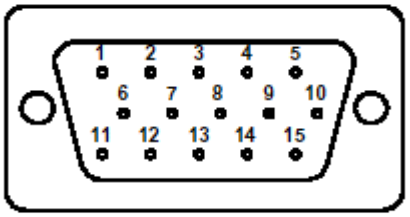
LCD panel	17''/19" TFT
Power management	Energy Star compliant VESA DPMS compatible
Displayable Resolution	1024 x 1280 75Hz (max.)

Pixel Dimension	0.264 (V) x 0.264 (H) mm /0.296(H) / 0.296(V) mm
LCD Display Color	8bit
Viewing Angle	Horizontal: ± 80°H Vertical: ±80° V
Contrast Ratio	500 : 1
Brightness	300 cd/m2
Response Time	12ms
Active Display Area	337.920 (H) x 270.336(V) /376.32mm x 301.056mm
Temperature Operating	0°C ~ +35°C
Storage	-20°C ~ +60°C
Compliance	CE, FCC ,CB,CCC
Power Input Voltage	AC 110-240V
Consumption	40w(max)
Audio	2w(L) + 1(R)

5.2 SUPPORTING TIMING CHART (timing chart)

MODEL	support frequency	H-ynnc (KHZ)	bandwidth (MHZ)	Signal polarity	
				H	V
1	VGA 640 X 480 60Hz	31.47	25.175	-	+
2	VESA 640 X480 72Hz	37.86	31.5	-	+
3	VESA 640 X 480 75Hz	37.5	31.5	-	+
4	VGA 720 X 400 70HZ	31.47	28.322	-	+
5	VESA 800 X 600 60Hz	37.88	40	+	+
6	VESA 800 X 600 72Hz	48.08	50	+	+
7	VESA 800 X 600 75Hz	46.88	49.5	+	+
8	MAC 832 X 624 75Hz	49.72	57.28	-	+
9	VESA 1024 X 768 60Hz	48.36	65	-	-
10	VESA 1024 X 768 70Hz	56.48	75	-	-
11	VESA 1024 X 768 75Hz	60.02	78.75	+	+
12	MAC1152X 870 75Hz	68.68	100	-	-
13	VESA1280X1024 60Hz	60	108	+	+
14	VESA1280 X 1024 75Hz	80	135	+	+

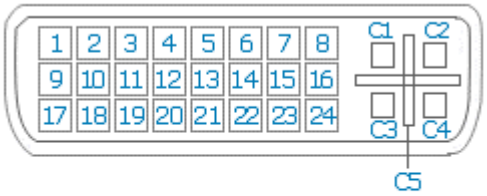
5.3 Pin - Assignment of 15-pin D-sub:



CONNECTOR SIGNAL DESCRIPTION

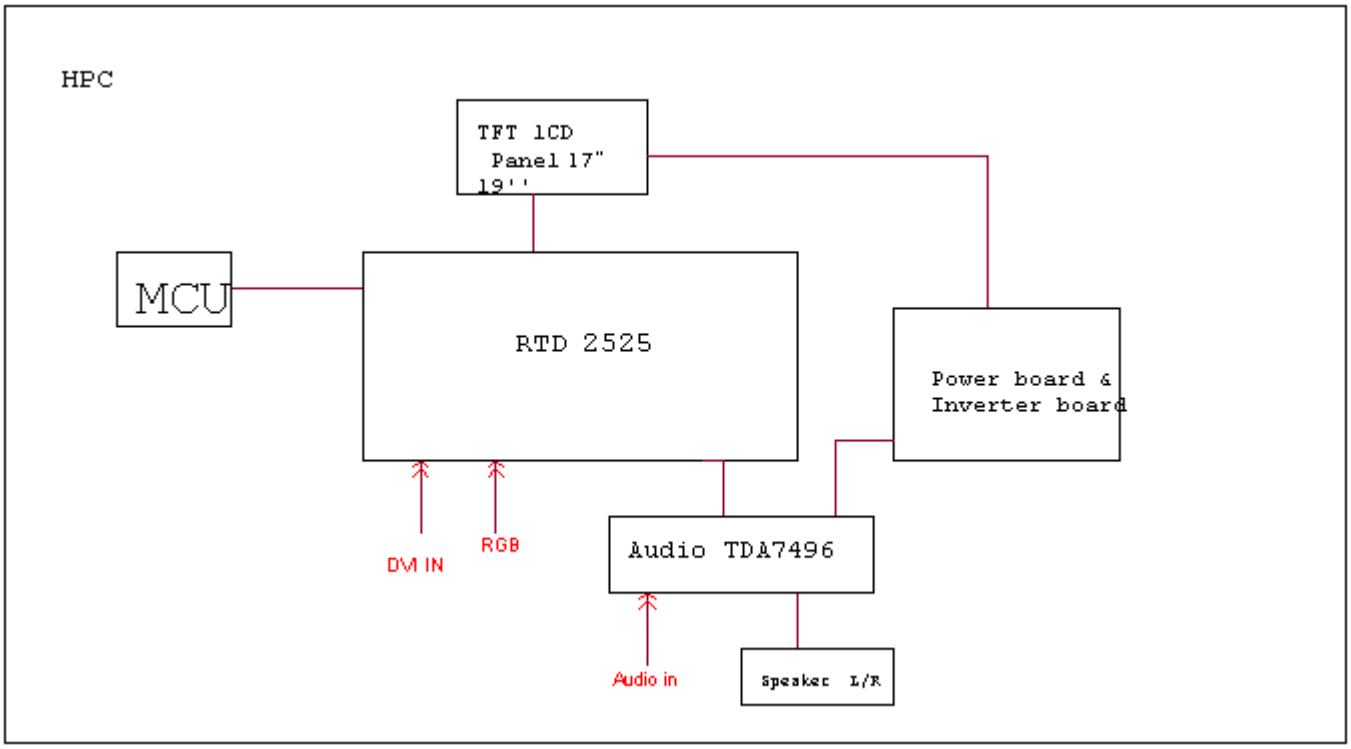
1.RED	2.GREEN	3.BLUE	4.NC	5.GND
6.GND	7.GND	8.GND	9. NC	10.GND
11.NC	12.SDA	13.H.hync	14.V.hync	15.SCL

Pin - Assignment of DVI:



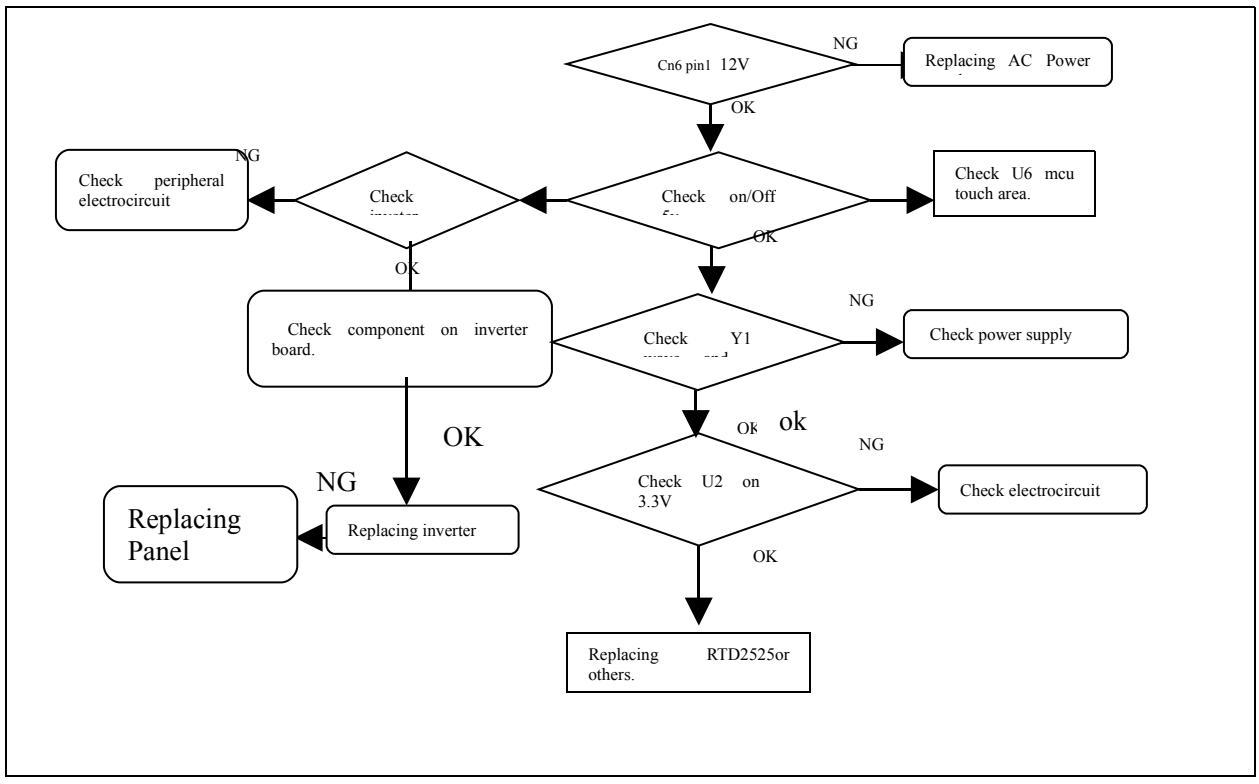
1. TMDS Data 2-	9. TMDS Data 1-	17. TMDS Data 0-
2. TMDS Data 2+	10. TMDS Data 1+	18. TMDS Data 0+
3. TMDS Data 2/4 shield	11. TMDS Data 1/3 shield	19. TMDS Data 0/5 shield
4. TMDS Data 4-	12. TMDS Data 3-	20. TMDS Data 5-
5. TMDS Data 4+	13. TMDS Data 3+	21. TMDS Data 5+
6. DDC Clock	14. +5V Power	22. Clock shield
7. DDC Data	15. GND	23. Clock +
8. Analog Vertical Sync	16. Hot Plug Detect	24. Clock -
C1.NC	C2.NC	C3.NC
C4.NC	C5.NC	

VII: BLOCK DIAGRAM

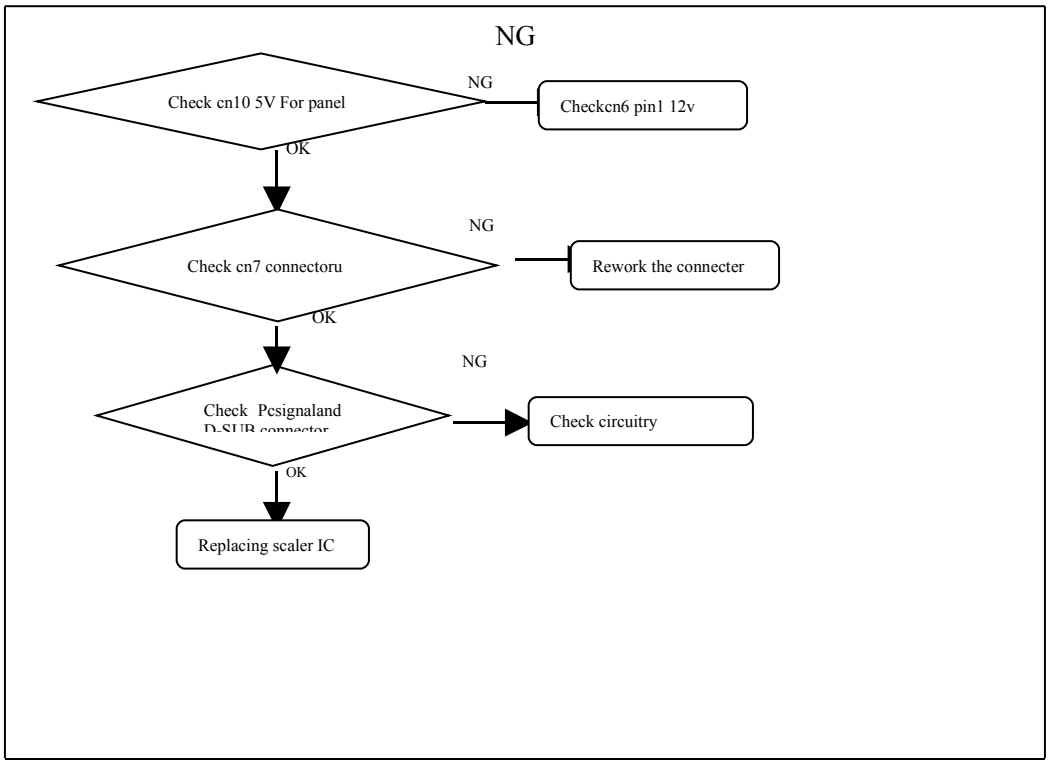


VIII:TROUBLE SHOOTING FLOW CHART

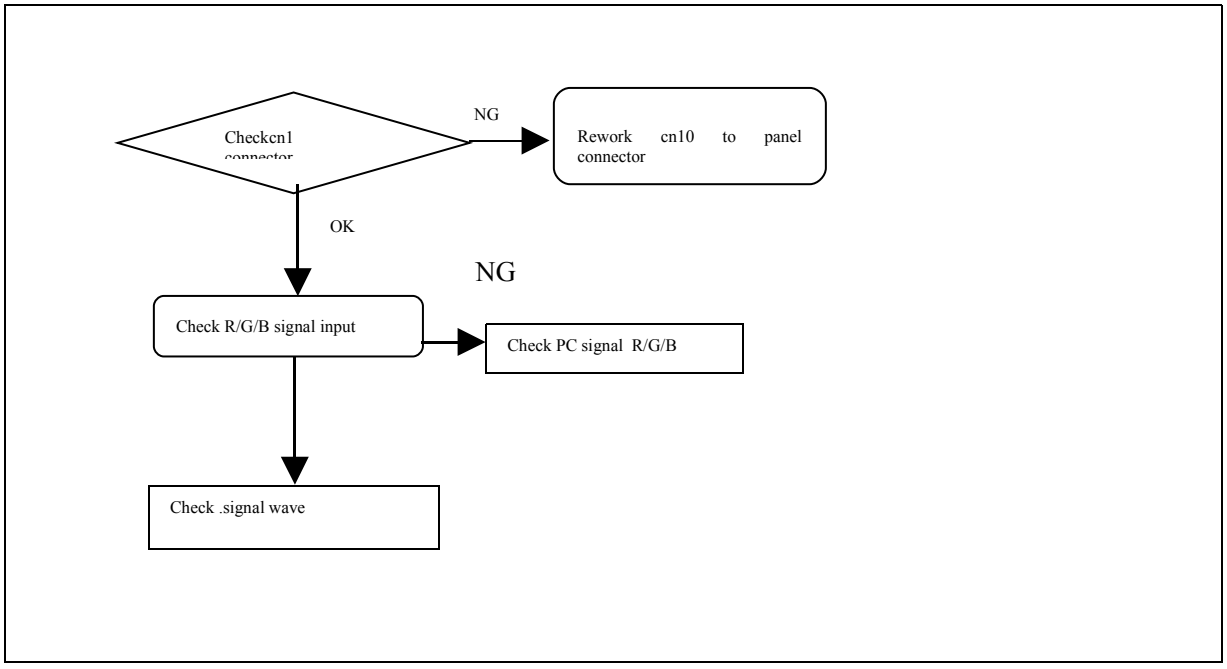
7.1 No power.



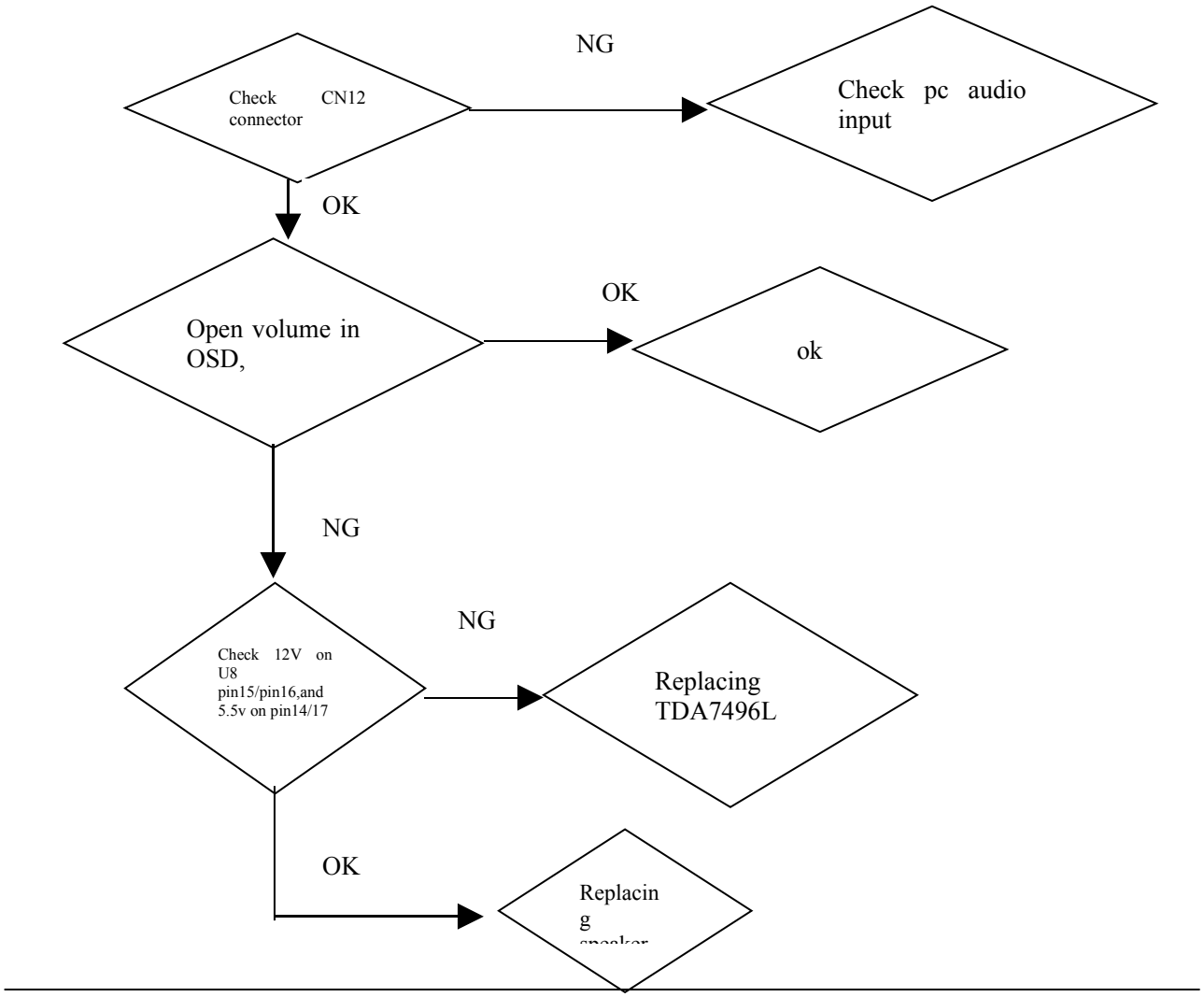
7.2 No display



7.3 loss color .



7.4 NO AUDIO



IX . Adjustment

8.1 Adjustment Conditions and Precautions:

1.1 . . Power supply voltage:
AC 110/120V± 10% 60 Hz± 5%, AC 220/240V± 10% 50 Hz ± 5%.
1.2 Warm up time:
The display must be power ON for at least 30 minutes at full white pattern before starting alignments. This is especially critical in color temperature and white balance adjustments.
1.3signal input
reference the front detail specifications and timing table.

8.2Adjustment procedure

2.1. Timing : 1280x1024@75Hz.

2.2 Pattern : Full white.

2.3 Set Chroma Color analyzer at the center of screen and along a perpendicular to the screen at 20cm from the display.

2.4. Under the normal display model ,press “Down” to close your monitor, then press Up to open it ,monitor will be into

factory preset mode, and pull out signal cable, will be BURN in mode.

2.5 .Select “9300” menu, adjust “red” until x=281±30, adjust “blue” until y=311±30. Then exit “9300” menu.

2.6 Select “6500” menu, adjust “red” until x=313±30, adjust “blue” until y=329±30. Then exit “6500” menu.

2.7 DC ON/OFF again, monitor will be exit factory mode menu.

2.8.On the OSD menu, color temperature set to 6500.

2.9. Change each mode on the timing table in turns and execute the “Auto Adjust ” function, then all the data of the each mode will be auto saved after finish the “Auto Adjust “ function.

X . Notice

9.1 I feel very thankful for buying our LCD products,and you can regard our repairing rules as your reference ;if we have

changed our repairing rules ,you will not be told again .Also, the eaxt repairing regulations should be in accordance with the

attched materials (include the product spcfication and use regulation)

9.2 The monitor has no any repairing material ,if you want to get service,please get in touch with local

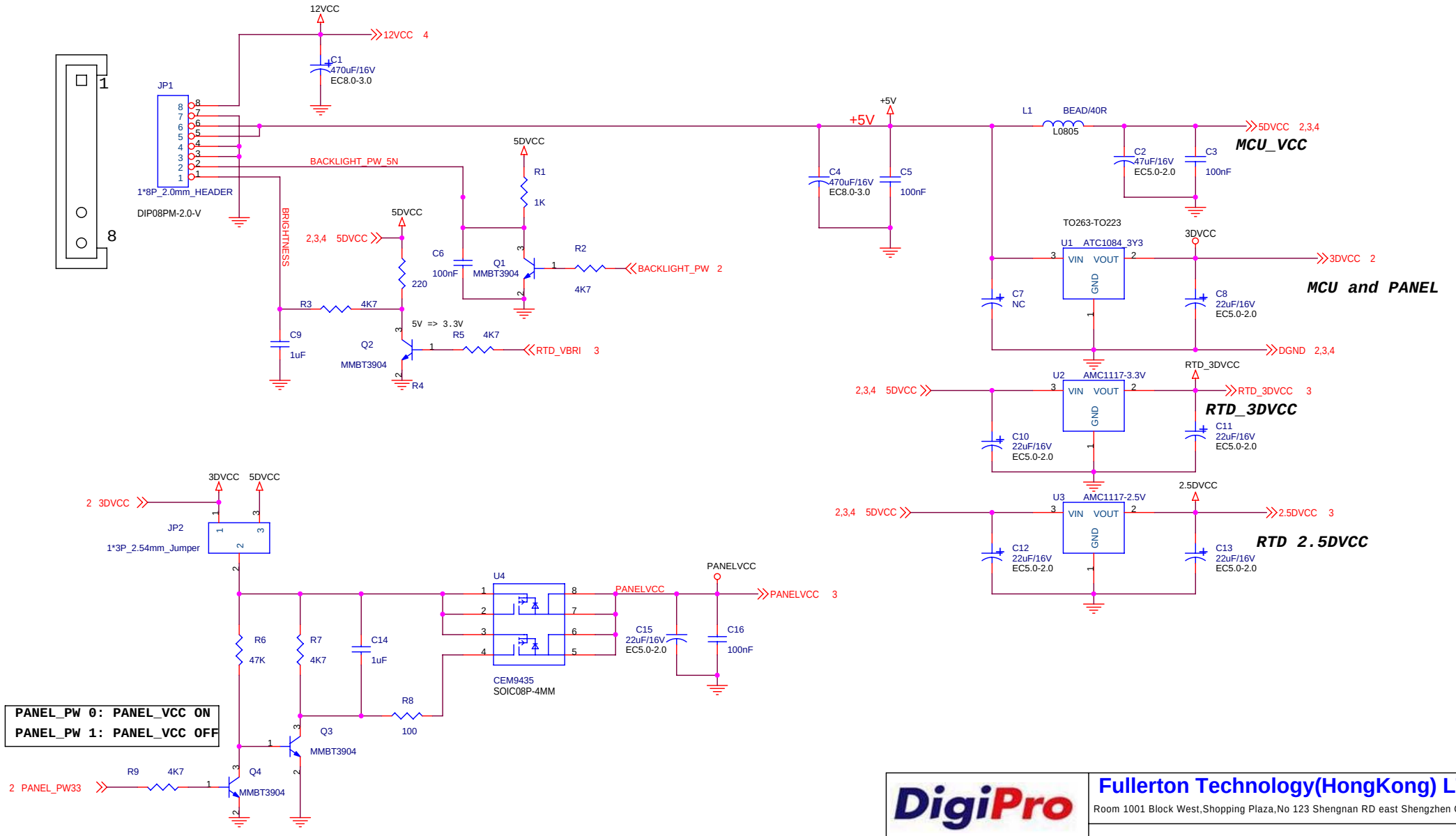
agent, or dail our free telephone: 800-830-7242

9.3 The ultimate explanation right of the repairing spcefication should be owed by the R&D Center of Hui

Pu Electronics (Shen Zhen) Co.Ltd .

HPC electronic(shenzhen)co.,LTD

January 2007



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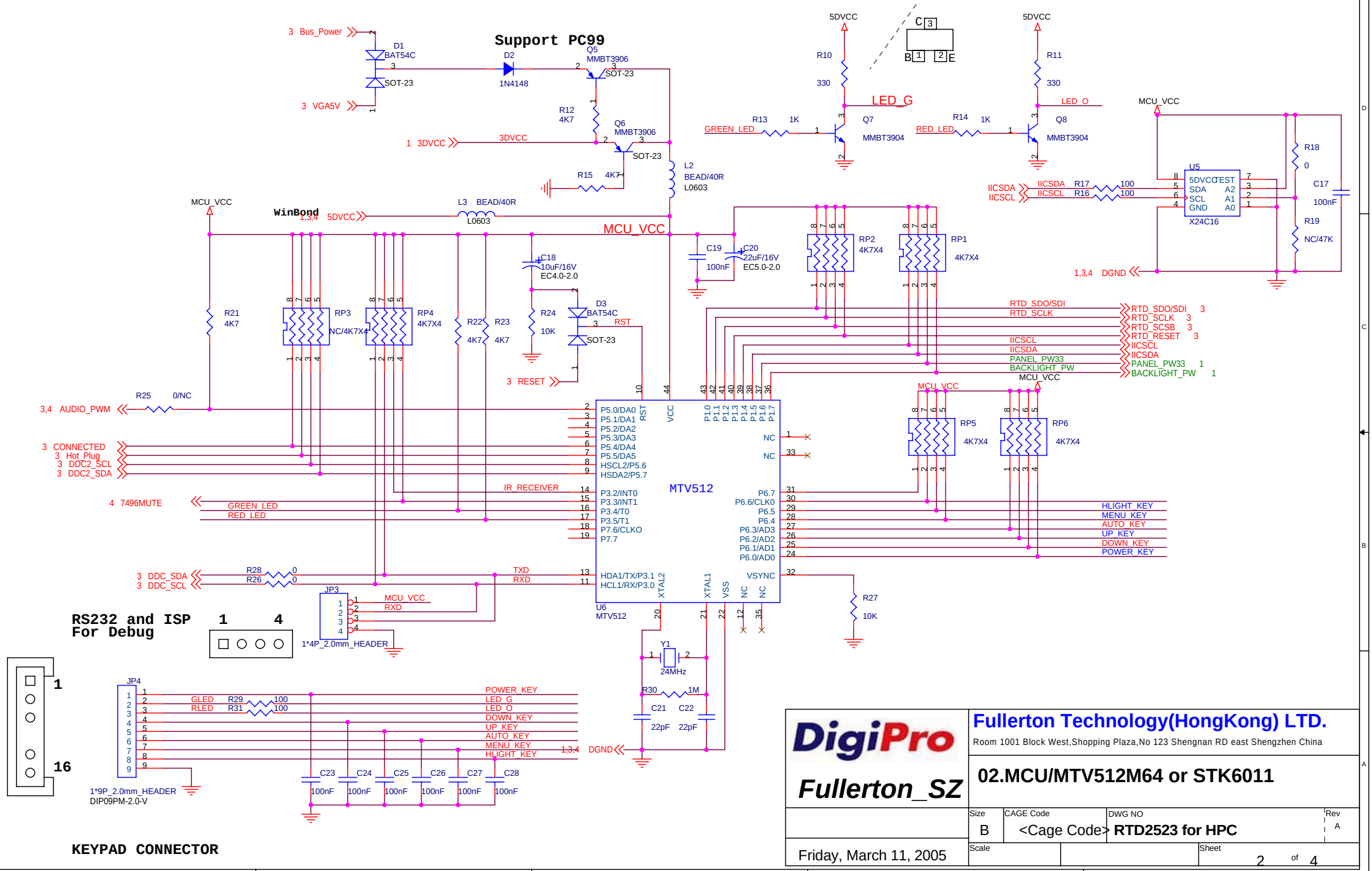
01.POWER

Size	CAGE Code	DWG NO	Rev
B	<Cage Code>	RTD2523 for HPC	A

Thursday, March 10, 2005

Scale

Sheet 1 of 4



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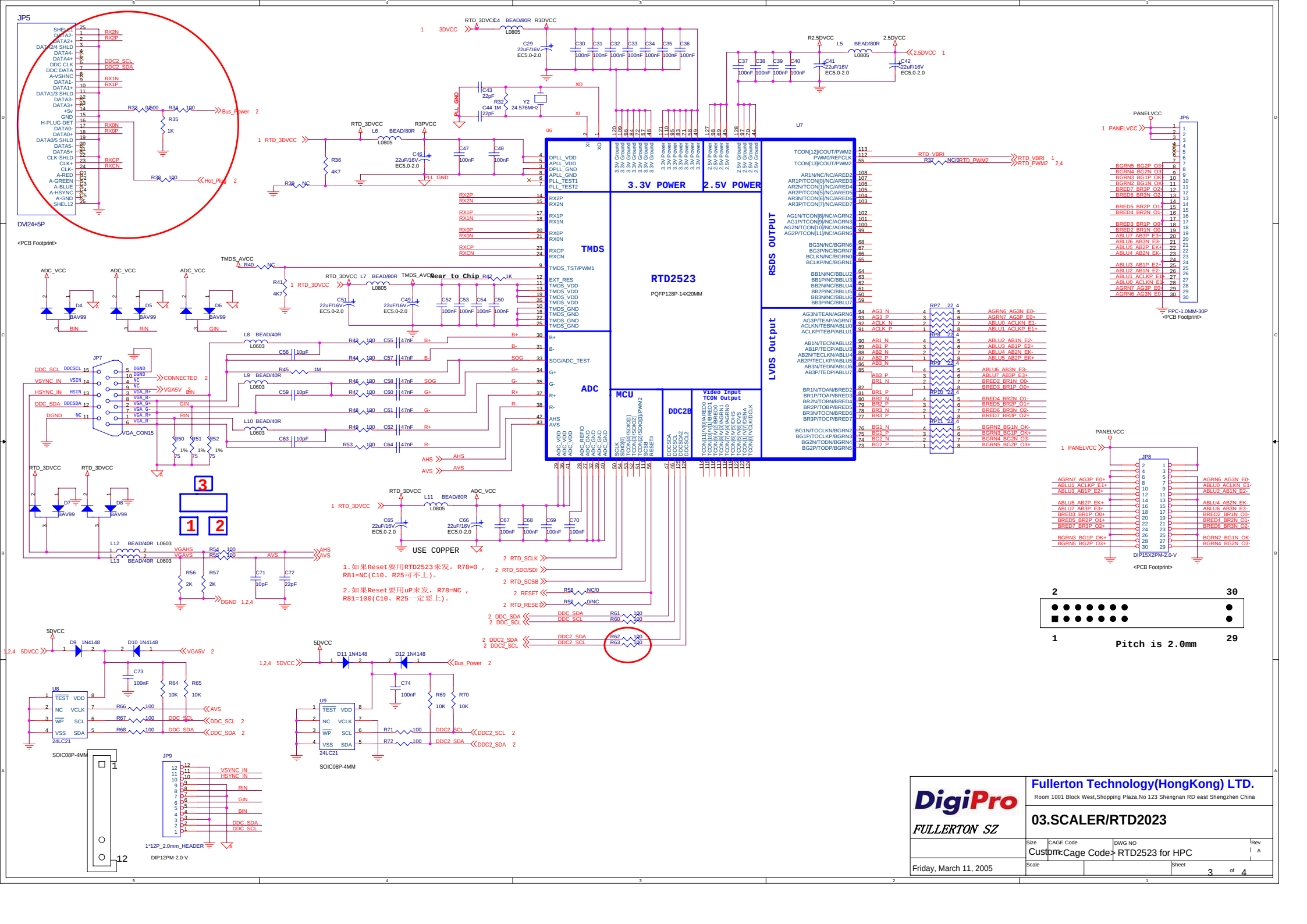
	02.MCU/MTV512M64 or STK6011		
	Size B	CAGE Code <Cage Code>	DWG NO RTD2523 for HPC
Friday, March 11, 2005	Scale		Sheet 2 of 4


JP5
DVI24+5P
<PCB Footprint>
RTD2523
PQFP128P-14X20MM
TMDS
ADC
MCU
DDC2B
Video Input
TCON Output
3.3V POWER
2.5V POWER
RSDS OUTPUT
LVDS Output
Near to Chip
JP7
VGA_CON15
USE COPPER
JP6
JP8
DIP15X2PM-2.0-V
FPC-1.0MM-30P
JP9
DIP12PM-2.0-V
1*12P_2.0mm_HEADER
SOIC08P-4MM
24LC21
1.如果Reset要用RTD2523来发，R78=0，R81=NC(C10、R25可不上)。
2.如果Reset要用uP来发，R78=NC，R81=100(C10、R25一定要上)。
Pitch is 2.0mm
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03.SCALER/RTD2023
Size
Custom
CAGE Code
<Cage Code>
DWG NO
RTD2523 for HPC
Rev
A
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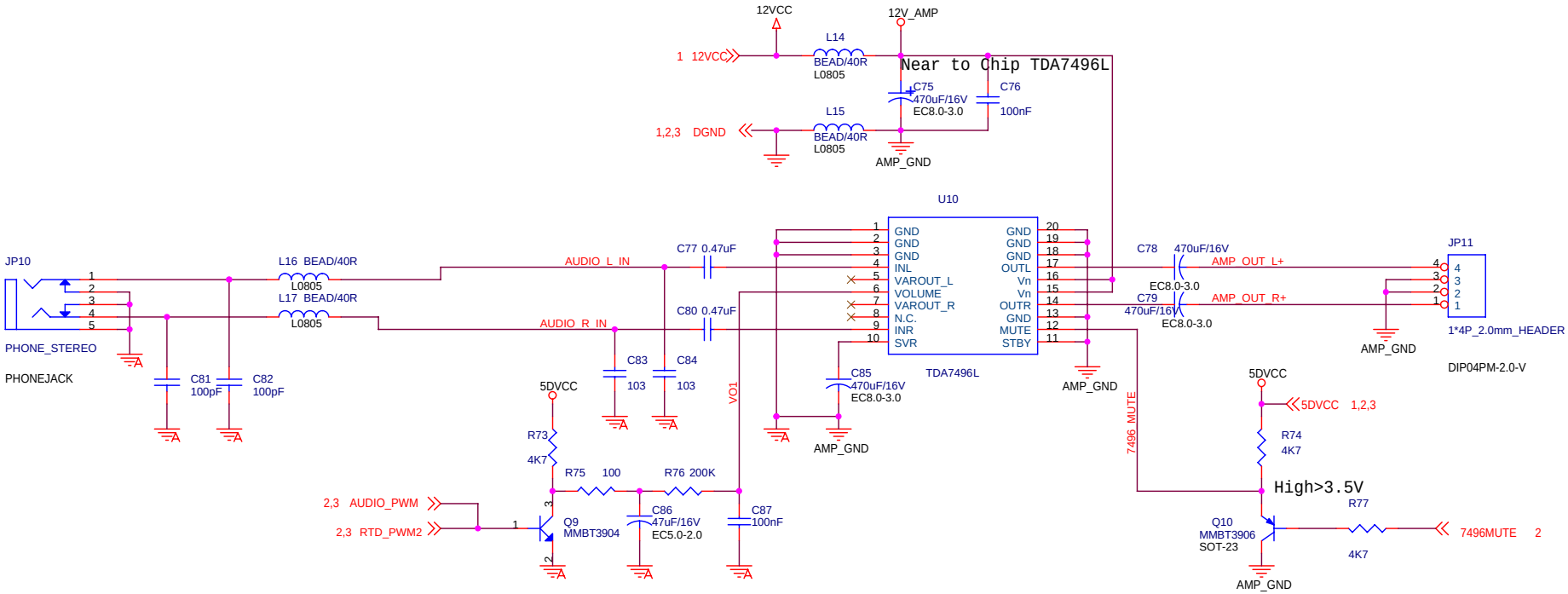
4
Friday, March 11, 2005



TDA7496L PIN11 is High,then Stand_by on
TDA7496L PIN12 is High,then MUTE on

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04.AUDIO/TDA7496L

Size	CAGE Code	DWG NO	Rev
B	<Cage Code>	RTD2523 for HPC	A

Thursday, March 10, 2005

Scale

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